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formed grooves or valleys **406** for receiving adhesive when the lamination step is performed to unite the siding cover portion to the backer portion of the paneling unit. The valleys can be practically any cross section shape. In an exemplary embodiment the valleys may be “v” shaped grooves of about 0.1016 inch radius curvature and about 0.0625 inch depth. Larger or smaller grooves of various shapes are within the scope of the present invention. The valleys may be formed in the backer at the same time the backer is formed, from a mold for example. By providing these valleys, the adhesive used to apply the backer to the cover portion, is given a greater surface area within which to flow in order to provide greater adhesion strength between the backer and the siding cover portion.

In FIG. 13A, the second side **404** of the backer of the present invention is shown in greater detail. In particular, FIG. 13A is a partial sectional view of the backer along line 13A-13A in FIG. 12. Ridges **408** are formed in the backer **400** to provide a ventilation space between the second side of the backer and the wall of a structure to which it is secured. These ridges **408** may be used in conjunction with water escape channels **410** to prevent moisture build-up in the paneling units. The ridges in a preferred embodiment may be about 0.045 inch high off the surface of the backer and about 0.5 inch wide. Larger or smaller ridges of various shapes are within the scope of the present invention. On the other hand, FIG. 13B is a partial sectional view of side **402** of the backer, which includes the aforementioned grooves or valleys **406** for receiving adhesive.

In FIG. 14, a recessed or relief zone **412** of the backer **400** is provided to enhance the fit between adjacent paneling units. By providing a slightly recessed zone of backer material an end of an adjacent backer may better overlap the recessed zone to provide an improved fit between adjacent backers. In a preferred embodiment of the present invention the recessed zone may be about 1.2784 inches long and about 0.100 inch wide along the profile. Larger or smaller relief zones of various shapes are within the scope of the present invention and may be formed into the backer at the same time the backer is being formed by use of a mold designed to the desired shape for example.

As shown in FIG. 12, side **402** of backer **400** may also include at least one recessed or relief zone **414** to enhance the fit between adjacent paneling units. Relief zone **414** may be adapted to receive an edge of an adjacent facing panel to provide an improved lap joint. Optionally, relief zone **412** may be contiguous with relief zone **414**. In this example, relief zone **414** starts approximately 1.250 inches from the top of the backer, and it is approximately 0.050 inch wide and approximately 2.0 inches deep. Nevertheless, larger or smaller relief zones of various shapes are within the scope of the present invention and may, for example, be formed into the backer at the same time the backer is being formed by use of a mold designed to the desired shape. Such as shown in FIG. 15, each edge of a backer may optionally include a relief zone similar to relief zone **414**.

The top or face portion of the paneling units may be smooth or may have any number of finishes that are typically known by those in the art of manufacturing paneling. The finish may add contour and texture to simulate the appearance of wooden paneling.

The paneling units of the present invention may be of various lengths, heights, and thicknesses. The particular dimensions of a panel of the present invention may be selected to suit a particular application. Some exemplary embodiments of a paneling unit of the present invention may be approximately 15 to 18 inches in height. However, as just

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mentioned, it should also be recognized that a paneling unit of the present invention may have any desired dimensions including a height up to or in excess of 50 inches.

The paneling units as described herein may be formed from a polymer such as a vinyl material. Other materials such as polypropylene, polyethylene, other plastics and polymers, polymer composites (such as polymer reinforced with fibers or other particles of glass, graphite, wood, flax, other cellulosic materials, or other inorganic or organic materials), metals (such as aluminum or polymer coated metal), or other similar or suitable materials may also be used. The paneling may be molded, extruded, roll-formed from a flat sheet, or formed by any other suitable manufacturing technique.

Any embodiment of the present invention may include any of the optional or preferred features of the other embodiments of the present invention. The exemplary embodiments herein disclosed are not intended to be exhaustive or to unnecessarily limit the scope of the invention. The exemplary embodiments were chosen and described in order to explain the principles of the present invention so that others skilled in the art may practice the invention. Having shown and described exemplary embodiments of the present invention, those skilled in the art will realize that many variations and modifications may be made to affect the described invention. Many of those variations and modifications will provide the same result and fall within the spirit of the claimed invention. It is the intention, therefore, to limit the invention only as indicated by the scope of the claims.

What is claimed is:

1. A paneling unit for a wall of a structure, comprising: a vinyl panel; and a backing portion secured to said vinyl panel, said backing portion comprised of: a first side adhered to and adjacent said vinyl panel; a second side adapted to be situated adjacent to said wall; and a first side end and a second side end for generally mating with adjacent paneling units, wherein at least one of said side ends has a recess formed on said first side of said backing portion for receiving a side end of a vinyl panel of one of said adjacent paneling units to facilitate an overlapping relationship with a side end of said one of said adjacent paneling units; wherein said first side comprises at least one valley filled with adhesive used in securing said backing portion to said vinyl panel.
2. The paneling unit of claim 1 wherein said backing portion is comprised of foamed plastic.
3. The paneling unit of claim 1 wherein said second side comprises at least one ridge for spacing said second side apart from said wall to enable ventilation between said backing portion and said wall once said paneling unit is secured to said wall.
4. The paneling unit of claim 1 wherein said at least one valley runs substantially horizontal along the length of said first side of said backing portion.
5. The paneling unit of claim 1 further comprising at least one water escape channel situated on said second side of said backing portion.
6. A paneling unit for a wall of a structure, comprising: a vinyl panel; and a backing portion secured to said vinyl panel, said backing portion comprised of: a first side adhered to and adjacent said vinyl panel, said first side comprising at least one valley filled with adhesive used in securing said backing portion to said vinyl panel;